

UNIVERSITY OF CALIFORNIA

VIRUS LABORATORY
BERKELEY 4, CALIFORNIA

January 11, 1955

Dr. Rosalind Franklin
Birkbeck College Crystallography Laboratory
21 Torrington Square
London, W. C. 1,
England

Dear Rosalind:


Thank you very much for sending your manuscript in advance of publication. Several of us were very much interested in your results, among them being Dr. Williams, from whom you have doubtless heard by now.

Dr. Fraenkel-Conrat and I found almost nothing to quarrel with you about on the chemical side and I, at least, am not able to follow you very well on the crystallography. I might suggest in connection with the first page of the manuscript that most people use the figure 6% for the quantity of RNA in TMV. The portion of the paper which interested me a great deal is the evidence for the presence of some water within the viral particles. If this is really the case then we chemists picture a variety of chemicals penetrating the interior of the virus to react with various things. I will, of course, have to revise my argument concerning the location of the nucleic acid in the virus since it was based on the conception of an anhydrous particle.

In connection with the materials which we sent you, Dr. Fraenkel-Conrat says that the I-TMV contains about 0.74% iodine, which is about one iodine per 17,000. More of this material is available if you want it. I am sorry that the samples did not arrive in better condition and we shall try to send the next ones under moist~~er~~ conditions. The CV4 has a higher isoelectric point than TMV and since it is insoluble in its isoelectric zone, is inclined to come out of solution as a white precipitate, particularly when the salt concentration is low. You would probably find that the white precipitate you observed would dissolve readily if a bit of dilute ammonia were added or dilute alkali of any kind. Addition of a trace of salt will also tend to reduce gel formation exceedingly. We can provide more CV4 also if you should like to have it.

Since you did not request the return of the paper, may I assume that we may keep this for reference and further study?

Yours sincerely,


C. A. Knight

CAK/mla